

REMARKS

In the Final Office Action mailed June 19, 2007, claims 1-14 and 50-70 were pending. Claims 1-10, 12-14, 50-52, 54-56, 58-68 and 70 stand rejected, while claims 11, 53, 57 and 69 have been objected to as being dependent upon a rejected base claim, but were indicated as allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. In this response, claims 1, 8, 13, 54, 59, 61, 65 and 66 have been amended. In view of the following remarks, reconsideration and allowance of the present application as amended and including claims 1-14 and 50-70, are hereby requested.

Claim Rejections

Claims 61 and 63-65 stand rejected under 35 U.S.C. §102(a) as being anticipated by European Patent No. 0,916,323 A1 to Schafer et al. (hereafter "Schafer"); claims 1, 2, 4-10, 12, 13, 50-52, 61, 62, 65 and 66 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,607,424 to Tropiano (hereafter "Tropiano"); claims 1, 2, 4-6, 8-10, 12-14, 50-52, 54-56, 58-62, 65-68 and 70 stand rejected under 35 U.S.C. §102(b) as being anticipated by International Patent Application Publication No. WO 97/15248 A1 to Cottle (hereafter "Cottle"); claims 1-7, 61 and 63-65 stand rejected under 35 U.S.C. §102(a) as being anticipated by International Patent Application Publication No. WO 99/37255 to Fuss et al. (hereafter "Fuss"); claims 8, 9, 12, 14, 54, 55, 58, 60-62 and 65-67 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,086,613 to Camino et al. (hereafter "Camino"); and claims 1, 2, 4, 5-7, 61 and 65 stand rejected under 35 U.S.C. §102(b) as being anticipated by International Patent Application Publication No. WO 97/23175 to Grosse et al. (hereafter "Grosse").

35 U.S.C. §102 Rejections

It is well established that "an invention is anticipated if the same device, including all the claim limitations, is shown in a single prior art reference. Every element of the claimed invention must be literally present, arranged as in the claim." Richardson v. Suzuki Motor Co. Ltd., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The claims must not be treated as "mere catalogs of separate parts, in disregard of the part-to-part relationships set forth in the claims and that give the claims their meaning." Lindemann Maschinenfabrik GMBH v.

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American Hoist and Derrick Company et al., 730 F.2d 1452, 1459, 221 USPQ 481, 486 (Fed. Cir. 1984). As a result, a reference that coincidentally lists features of a claim without describing the claimed arrangement, relationship, and organization of such features cannot anticipate.

Claims 61 and 63-65 stands rejected under 35 U.S.C. §102(a) as being anticipated by Schafer. As an initial matter, Applicants reserve the right to remove Schafer with an affidavit under 37 C.F.R. §1.131 in this and any continuing applications. However, assuming only *arguendo* that Schafer may be asserted with respect to the present application, it is believed that claims 61 and 63-65 are patentable thereover as will be explained in the following comments.

Claim 61 has been amended and now recites, among other features and elements, "wherein said trailing end wall and said leading end wall each have a height between said upper and lower bearing members that is less than the height of both said anterior wall and said posterior wall between said upper and lower bearing members, and said anterior wall has a height between said upper and lower bearing members greater than a height of said posterior wall between said upper and lower bearing members." Support for the amendment to claim 61 may be found, for example, in Figure 52 and in the written description of the originally filed application at page 26, lines 13-21.

With respect to this rejection of claim 61, the Final Office Action indicates that Figure 5 of Schafer "clearly shows a "height" (e.g., the spacing between holes 10, 11) of either said leading end wall or said trailing end wall that is less than the height of both said anterior wall and said posterior wall." See, Final Office Action, page 4. Additionally, the Final Office Action interprets "height" as any height along a wall because "[t]he claim language does not specify the extent of said "height" (e.g., from the upper bearing member to the lower bearing member)." See, Final Office Action, page 4. Claim 61 has been amended to further clarify certain aspects of the present invention. Particularly, as indicated above, claim 61 now recites "a height between said upper and lower bearing members."

Schafer clearly does not disclose the features of amended claim 61. Instead, as illustrated in Figure 5 for example, lateral wall portion 7 tapers between anterior and posterior wall portions 4 and 5, such that its shortest height between upper and lower bearing members, positioned where wall portion 7 intersects with wall portion 5, is the same as the height of posterior wall portion 5 between upper and lower bearing members. Therefore, while the lateral walls 6 and 7

may have a height between upper and lower bearing members which is less than the height of anterior wall portion 4 between upper and lower bearing members, neither is disclosed as having a height between upper and lower bearing members shorter than posterior wall portion 5. Accordingly, Schafer does not disclose the features of claim 61. Therefore, Applicants respectfully request withdrawal of this rejection of claim 61. Furthermore, claims 63-65, which depend from claim 61, are submitted as patentable over Schafer for at least the reasons supporting the patentability of claim 61.

Tropiano has been asserted to anticipate claims 1, 2, 4-10, 12, 13, 50-52, 61, 62, 65 and 66 under 35 U.S.C. §102(b). The Final Office Action indicates that "[t]he terms 'anterior', 'posterior', 'upper', and 'lower' are broadly interpreted since the claim language does not indicate points of reference (upper bearing member faces the upper vertebra; anterior wall faces the anterior side of the spinal column; etc.)." Moreover, the Final Office Action also indicates that these terms are broadly interpreted as labels since the claim language does not indicate points of reference. See, Final Office Action, page 5. Additionally, the Final Office Action also recites "it is the claims that define the claimed invention, and it is claims, not specifications that are anticipated or unpatentable." See, Final Office Action, page 6.

As an initial matter, it has not been submitted that the specification defines the claimed invention (emphasis added). Rather, in the previous response, it was submitted that the terms of the claims of the subject application had been improperly interpreted. Further, in the instant response, it is submitted that the asserted interpretation of these claims is inconsistent with various sections of the *Manual of Patent Examining Procedure* (MPEP). Consequently, it is submitted that the interpretation of these claim terms is still improper. For example, "[d]uring examination, the claims must be interpreted as broadly as their terms reasonably allow." See MPEP §2111.01 I (citing In re American Academy of Science Tech Center, 367 F.3d 1359, 1369, 70 USPQ2d 1827, 1834 (Fed. Cir. 2004)). As further clarification, the MPEP indicates this means that "[t]he words of a claim must be given their plain meaning unless the plain meaning is inconsistent with the specification." See Id. (citing In re Zletz, 893 F.2d 319, 321, 13 U.S.P.Q.2d 1320, 1322 (Fed. Cir. 1989)). Furthermore, "plain meaning" can be defined as "the ordinary and customary meaning . . . that the term would have to a person of ordinary skill in the art in question at the time of the invention." See MPEP §2111.01 III (citing Phillips v.

AWH Corp., 415 F.3d 1303, 1313, 75 U.S.P.Q.2d 1321, 1326 (Fed. Cir. 2005). Additionally, the MPEP further instructs “[i]t is the use of the words in the context of the written description and customarily by those skilled in the relevant art that accurately reflects both the “ordinary” and the “customary” meaning of the terms in the claims.” See Id. (citing Ferguson Beauregard/Logic Controls v. Mega Systems, 350 F.3d 1327, 1338, 69 USPQ2d 1001, 1009 (Fed. Cir. 2003)).

It is respectfully submitted that the Final Office Action’s interpretation of the claim terms “anterior”, “posterior”, “upper”, and “lower” is not consistent with the plain meaning of these terms as would be interpreted by one having skill in the art. Particularly, the ordinary and customary meaning of these terms to a person of ordinary skill in the art would be used to describe portions of the implant relative to anatomical features of the spinal column. For example, a posterior wall faces posteriorly when implanted, while an anterior wall faces anteriorly when implanted. Likewise, one having skill in the art would interpret these terms to have these meanings and would not consider them as “labels” as recited in the Final Office Action. Additionally, even assuming only *arguendo* that the interpretation of these terms in the Final Office Action is consistent with their plain meaning, such an interpretation is inconsistent with the specification of the subject application and conflicts with the holding of In re Zletz indicated above. Particularly, the specification discloses, on page 26, lines 6-7, that “[i]mplant 1000 includes a concave posterior wall 1002 and an opposite convex anterior wall 1004” while Figure 51 illustrates the implant 1000 relative to a vertebra V1 with the concave wall facing posteriorly and the convex wall facing anteriorly. Accordingly, for at least these reasons, it is submitted that the terms “anterior”, “posterior”, “upper” and “lower”, when properly interpreted by considering both the written description of the subject application and the customary use by those skilled in the art, are used to provide points of reference of the implant configuration relative to the patient anatomy when implanted in the patient. Likewise, when interpreted properly, it is clear that Tropiano fails to disclose the features of the pending claims.

Each of the independent claims (1, 8, 61 and 66) rejected in view of Tropiano is directed to a spinal implant comprising, among various other features, a leading end wall defining an implantation direction of the spinal implant, a trailing end wall opposite said leading end wall, a posterior wall extending between said leading end wall and said trailing end wall and an anterior wall extending between said leading end wall and said trailing end wall. The Final Office Action

asserts that Tropiano discloses a leading end wall 16, a trailing end wall 18, a posterior wall 22 and an anterior wall 20 (see page 4). It also references Figure 4 as disclosing that leading end wall 16 and trailing end wall 18 define a direction of implantation. It is noted that the direction of implantation defined by walls 16 and 18 and illustrated in Figure 4 clearly positions walls 16 and 18 anteriorly and posteriorly, respectively. Consequently, in such direction of implantation, wall 16 is both an implantation leading end and an anterior wall and wall 18 is both an implantation trailing end and a posterior wall. Additionally, with further reference to Figure 4, where the Final Office Action asserts the direction of implantation is defined, it is clear that no other portion of cage 10 is an anterior wall or a posterior wall. For example, top 20 and bottom 22 both respectively face superiorly and inferiorly while side surfaces 12 and 14 respectively face laterally and medially. Consequently, Tropiano fails to disclose a posterior wall extending between a leading end wall and a trailing end wall and an anterior wall extending between a leading end wall and a trailing end wall. Accordingly, each of claims 1, 8, 61 and 66 is respectfully submitted as patentable thereover.

In further regard to claim 1, each of claims 2, 4-7 and 50-52 depends therefrom or an intervening claim and is submitted as patentable for at least the reasons supporting the patentability of claim 1. Additional reasons support the patentability of these claims as well. For example, Tropiano does not disclose a leading end wall which includes an insertion tool engaging portion as is recited in claim 6. Moreover, claims 50-52 are further patentable over Tropiano for the reasons set forth immediately hereafter in regard to the patentability of claim 8 and the claims depending therefrom.

In addition to the above, independent claim 8 also recites "said upper bearing member and said lower bearing member each include a cantilevered portion extending beyond said anterior wall." The Final Office Action asserts that "portions of 16, 18 and struts 50 extend outward and beyond planar surface 20." See, page 5. However, "planar surface 20" is disclosed as a top (see column 3, line 32), not as an anterior wall. Additionally, the written description at column 3, lines 45-52, indicates that top 20 is structured to mate with adjacent vertebral surfaces; further clarifying that top 20 is not positioned anteriorly. Moreover, as set forth above, front surface 16 is the anterior wall of implant 10. Likewise, it is clear that no portion of top 20 and

bottom 22 extend beyond the front surface or anterior wall 16. Therefore, claim 8 is further submitted as patentable over Tropiano.

Claims 9, 10, 12 and 13 depend from claim 8 or an intervening claim and are submitted as patentable over Tropiano for at least the same reasons supporting the patentability of claim 8. Additional reasons also further support the patentability of these claims. For example, claims 9 and 10 are both directed to the anterior wall including first and second openings. It is clear that the anterior wall 16 of cage 10 does not include any openings.

Claim 61 is also further patentable over Tropiano. For example, it recites, among other features, "wherein said trailing end wall and said leading end wall each have a height between said upper and lower bearing members that is less than the height of both said anterior wall and said posterior wall between said upper and lower bearing members, and said anterior wall has a height between said upper and lower bearing members greater than a height of said posterior wall between said upper and lower bearing members." As discussed above, Tropiano does not distinguish between 1) the anterior wall and the leading end and 2) the posterior wall and the trailing end. Therefore, it is clear that it can not disclose the above indicated features of claim 61. Additionally, even assuming only *arguendo* that top 20 and bottom 22 were anterior and posterior walls, respectively, as asserted in the Final Office Action, Tropiano does not disclose that "the leading end 16" and "the trailing end 18" have a height between upper and lower bearing members that is less than the height of both an anterior wall and a posterior wall between upper and lower bearing members. Accordingly, for at least these reasons, claim 61 is further submitted as patentable over Tropiano. Claims 62 and 65 depend directly from claim 61 and are submitted as patentable over Tropiano for at least the same reasons supporting the patentability of claim 61.

Claim 66 is directed to an implant including several additional features which are also not disclosed by Tropiano. For example, it recites "said anterior wall includes at least one strut positioned between openings on each side thereof." It is clear that the front surface or anterior wall 16 does not include a strut or any openings. Claim 66 also recites "said upper bearing member and said lower bearing member each include a cantilevered portion extending beyond said strut and said openings." As indicated above with respect to claim 8, it is clear that neither of top 20 and bottom 22 includes a portion extending beyond anterior wall 16. Claim 66 has also

been amended to recite "wherein said trailing end wall and said leading end wall each have a height between said upper and lower bearing members that is less than the height of both said anterior wall and said posterior wall between said upper and lower bearing members, and said anterior wall has a height between said upper and lower bearing members greater than a height of said posterior wall between said upper and lower bearing members." For the reasons similar to those submitted above in regard to claim 61, it is respectfully submitted that Tropiano does not disclose this feature. Accordingly, claim 66 is further submitted as patentable over Tropiano for these reasons as well.

As indicated above, claims 1, 2, 4-6, 8-10, 12-14, 50-52, 54-56, 58-62, 65-68 and 70 were rejected under 35 U.S.C. §102(b) as being anticipated by Cottle. Of these, claims 1, 8, 54, 61 and 66 are independent claims, with each being directed to an implant comprising, among various other features, a leading end wall defining an implantation direction of the implant, a trailing end wall opposite said leading wall, a posterior wall extending between said leading end wall and said trailing end wall and an anterior wall extending between said leading end wall and said trailing end wall. The Final Office Action indicates that Cottle discloses an implant including a leading end wall 13, a trailing end wall 14, a posterior wall 15 and an anterior wall 16. To the contrary, Cottle does not teach, suggest or disclose that either of lateral faces 13, 14 of implant 1 define an implantation direction of the implant. Instead, with respect to the implant of Figure 1, Cottle discloses that "the front wall 16 of the cage 1 has two grooves 17 to receive an instrument, so that the cage 1 can be inserted into the intervertebral space." See col. 4, lines 12-15 of U.S. Patent No. 5,888,227 (hereafter "the '227 patent") which corresponds to Cottle. Likewise, this clearly indicates that posterior wall 15 is a leading end and defines the implantation direction of the implant while anterior wall 16 is a trailing end.

Additionally, with respect to the embodiments illustrated in Figures 4-8, Cottle indicates that "[a]part from the modifications described below, these have the same features as the embodiments of FIGS. 1-3." See, col. 4, lines 16-18 of the '227 patent. From that point forward, Cottle discloses that implant 1 includes grooves 27, 28 which can accept a suitable manipulation instrument, but it does not disclose anything further in regard to how the implant is inserted. Therefore, with respect to the embodiments illustrated in Figures 4-8, Applicants

respectfully submit that posterior wall 15 is a leading end and defines the implantation direction of the implant while anterior wall 16 is a trailing end.

However, the Final Office Action now also indicates that “[r]eceptacles 16 are disclosed as capable of receiving an implantation/manipulation tool (see column 4, lines 23-26), and therefore define a direction of implantation.” See, page 9. As an initial matter, it is noted that reference numeral 16 refers to an anterior wall of cage 1. However, after reviewing the cited portion of the ‘227 patent, it is assumed the Final Office Action intended to cite longitudinal holes 19 as being capable of engaging a manipulation instrument. Particularly, the cited portion of the ‘227 patent recites, verbatim, “[t]he longitudinal holes 19, which are positioned in the lateral faces 13, 14, also have lateral grooves 2[8], which can accept a suitable manipulation instrument.” Contrary to the assertion of the Final Office Action, this portion clearly does not disclose anything with respect to an implantation tool. (Emphasis added). Instead, as indicated above, Cottle only references grooves 17 on anterior wall 16 as receiving an instrument for insertion of cage 1 into an intervertebral space. Consequently, posterior wall 15 is clearly a leading end that defines the implantation direction of the implant.

Accordingly, it is respectfully submitted that Cottle fails to disclose those features as arranged in claims 1, 8, 54, 61 and 66. Therefore, each of these claims is submitted as patentable over Cottle for at least this reason.

In further regard to claim 1, it also recites “at least one strut extending between said posterior wall and said anterior wall.” Cottle does not disclose a strut extending between the posterior wall and the anterior wall. With respect to this feature, the Final Office Action recites “see, for example, the center strut running along the bearing member from anterior wall 16 to posterior wall 15.” See, page 9. After reviewing each of Figures 4, 5 and 8 and the written description corresponding thereto, no disclosure of any strut extending between anterior wall 15 and posterior wall 16 was identified. Instead, cage 1 includes faces 11, 12 which extend between the walls 15, 16 and include a plurality of perforations 24. However, Cottle fails to disclose any center strut running along the bearing member, as suggested by the Final Office Action. Therefore, claim 1 is further submitted as patentable over Cottle for this reason as well.

Each of claims 2, 4-6 and 50-52 depends from base claim 1 or an intervening claim and is submitted as patentable for at least the reasons supporting the patentability of base claim 1.

Additionally, claim 2 recites "said trailing end wall and said leading end wall each have a height that is less than the height of both of said anterior wall and said posterior wall." As indicated above, posterior wall 15 is the leading end wall while anterior wall 16 is the trailing end wall. Consequently, it is not possible for Cottle to anticipate the features of claim 2. Moreover, even assuming only *arguendo* that lateral walls 13, 14 were "leading end and trailing end walls", it is clear that neither has a height that is less than both anterior wall 16 and posterior wall 15. Instead, as clearly seen in Figure 6 for example, the height of the lateral walls 13, 14 at their shortest point, which is where they intersect with the posterior wall 15, is the same as the height of the posterior wall 15. The Final Office Action however asserts that "height" is interpreted as any height along a wall. However, it fails to disclose a height along either of walls 13, 14 which is less than a height along wall 15. Moreover, for the reasons that follow in regard to the patentability of claim 8 and the claims depending therefrom, claims 50-52 are further submitted as patentable over Cottle.

Claim 8 also recites "said upper bearing member and said lower bearing member each include a cantilevered portion extending beyond said anterior wall" (emphasis added). The Final Office Action asserts Figures 4 and 6 illustrate the upper bearing member and the lower bearing including a cantilevered portion extending beyond the anterior wall. Cottle does not disclose this feature. Instead, Cottle discloses that anterior wall 16 includes grooves 27 formed therein, such that, as clearly indicated by reference numeral 16 in Figure 6, the anterior wall 16 extends beyond the groove 27. Additionally, Cottle discloses that anterior wall 16 includes an aperture 25, which, as illustrated in Figure 5, opens flush with the anterior most portion of cage 1. Likewise, anterior wall 16 defines the anterior most portion of cage 1. Consequently, as illustrated in Figure 6 as well, it is clear that no portion of faces 11, 12 extend beyond anterior wall 16. Therefore, claim 8 is further submitted as patentable over Cottle.

Claims 9, 10 and 12-14 depend from base claim 8 or an intervening claim and are submitted as patentable over Cottle for at least the same reasons supporting the patentability of base claim 8. Additional reasons also further support the patentability of these claims. For example, claim 9 recites that the anterior wall includes first and second openings. The anterior wall 16 includes aperture 25, but does not include any additional openings. However, in contradiction to the rejection of claim 8, the Final Office Action indicates that grooves 27 define

openings in anterior wall 16, where the groove was said to disclose the anterior wall. Assuming only *arguendo* that grooves 27 are "openings" in anterior wall 16, it is clear that the anterior most portion of cage 1 is defined by anterior wall 16 and that no portion of faces 11, 12 extend beyond wall 16. As an alternative, if grooves 27 are considered the anterior wall with faces 11, 12 extending there beyond, it is clear that grooves 27 do not include first and second openings. Thus, it is respectfully submitted that Cottle is interpreted and applied inconsistently in rejecting the claims, and that the rejection of these claims is improper for the reasons provided above.

As a further example, the implant of claim 10 includes several features that are distinguishable from Cottle. For example, in relation to the openings of claim 9, claim 10 recites "said first anterior lateral opening is defined between a first vertical strut, said leading end wall and said upper and lower bearing members and said second anterior lateral opening is defined between a second vertical strut, said trailing end wall and said upper and lower bearing members." It is clear that Cottle does not disclose these features.

With further respect to claim 54, it is also patentable over Cottle. For example, it recites "said anterior wall includes at least one strut positioned between openings on each side thereof, and said upper bearing member and said lower bearing member each include a cantilevered portion extending beyond said strut and said openings." For at least the same reasons set forth above in regard to claim 8, it is submitted that Cottle does not disclose that cover and base faces 11, 12 include a cantilevered portion extending beyond a strut of the anterior wall. However, the Final Office Action asserts that anterior wall 16 includes lateral openings 27 "and lateral struts (each located between 27 and 28)." This interpretation of Cottle supports Applicants position that faces 11, 12 do not include a cantilevered portion extending beyond a strut and openings of anterior wall 16. Particularly, assuming only *arguendo* that grooves 27 are "openings" in anterior wall 16, it is clear that the anterior most portion of cage 1, where the grooves 27 "open", would have to be defined by anterior wall 16. Likewise, no portion of faces 11, 12 extends beyond the anterior most portion of cage 1. As an alternative, if the grooves 27 are considered the anterior wall with faces 11, 12 extending there beyond, it is clear that grooves 27 do not include at least one strut positioned between openings on each side thereof. Thus, claim 54 is submitted as patentable over Cottle and withdrawal of this rejection is respectfully requested.

Additionally, claims 55, 56 and 58-60 depend from base claim 54 or an intervening claim and are submitted as patentable for at least the reasons supporting the patentability of base claim 54. Further reasons support the patentability of the claims depending from claim 54. For example, claims 55 and 56 respectively recite subject matter similar to that of claims 9 and 10, which as discussed above, is not disclosed by Cottle.

Claim 61 is also further patentable over Cottle. For example, it also recites, among other features, "wherein said trailing end wall and said leading end wall each have a height between said upper and lower bearing members that is less than the height of both said anterior wall and said posterior wall between said upper and lower bearing members, and said anterior wall has a height between said upper and lower bearing members greater than a height of said posterior wall between said upper and lower bearing members." As indicated above, posterior wall 15 is the leading end wall while anterior wall 16 is the trailing end wall. Consequently, it is not possible for Cottle to anticipate the features of claim 61. As discussed above, even assuming only *arguendo* that lateral faces 13, 14 were leading and trailing ends, respectively, as recited in the Final Office Action, Cottle does not disclose that lateral faces 13, 14 have a height between upper and lower bearing members that is less than the height of both anterior wall 16 and posterior wall 15 between upper and lower bearing members. Instead, as discussed above in regard to claim 2, the height of lateral walls 13, 14, at their shortest point, where they intersect with posterior wall 15, is the same as, not less than, the height of posterior wall 15. Accordingly, for at least these reasons, claim 61 is further submitted as patentable over Cottle. Claims 62 and 65 depend directly from claim 61 and are submitted as patentable over Cottle for at least the same reasons supporting the patentability of claim 61.

Claim 66 is directed to an implant including several features which are also not disclosed by Cottle. For example, it recites "wherein said trailing end wall and said leading end wall each have a height between said upper and lower bearing members that is less than the height of both said anterior wall and said posterior wall between said upper and lower bearing members, and said anterior wall has a height between said upper and lower bearing members greater than a height of said posterior wall between said upper and lower bearing members." For reasons similar to those asserted above in regard to claim 61, it is respectfully submitted that Cottle does not disclose this feature. Claim 66 also recites that "said upper bearing member and said lower

bearing member each include a cantilevered portion extending beyond said strut and said openings." For at least the reasons indicated above in regard to claim 54, Cottle also fails to disclose this feature. Accordingly, claim 66 is further submitted as patentable over Cottle for these reasons as well. Claims 67-68 and 70 depend from base claim 66 or an intervening claim and are submitted as patentable over Cottle for at least the reasons supporting the patentability of claim 66. Additionally, claims 67 and 68 are directed to subject matter similar to that of claims 9 and 10, which as discussed above, is not disclosed by Cottle. Moreover, claim 70 recites "said posterior wall is concave between said leading and trailing end walls and said anterior wall is convex between said leading and trailing end walls." It is clear that neither of posterior wall 15 and anterior wall 16 is concave. See e.g., Figures 5 and 8.

Each of claims 1-7, 61 and 63-65 stands rejected under 35 U.S.C. §102(a) as being anticipated by Fuss. As an initial matter, Applicants reserve the right to remove Fuss with an affidavit under 37 C.F.R. §1.131 in this and any continuing applications. However, assuming only *arguendo* that Fuss may be asserted with respect to the present application, it is believed that claims 1-7, 61 and 63-65 are patentable thereover as will be explained in the following comments.

Claim 1 has been amended and now recites, among other features and elements, "wherein said posterior wall . . . includes at least one opening extending therethrough, said at least one opening being centrally positioned between said leading end wall and said trailing end wall." Support for the amendment to claim 1 may be found, for example, in any of Figures 54-56 and the accompanying text in the written description. With respect to Fuss, the Final Office Action indicates that it discloses an implant including leading and trailing end walls defined by lateral wall 9, a posterior wall 11 and an anterior wall 10. It is respectfully submitted that Fuss fails to disclose that posterior wall 11 includes an opening extending therethrough that is positioned centrally between a leading end wall and a trailing end wall. More specifically, with respect to the embodiments illustrated in Figures 2a-2c, Fuss discloses "the boundary face 11 of the implant 4 facing spinous process does not incorporate openings or breakthroughs" See, col. 7, lines 12-14. Moreover, with respect to the embodiments illustrated in Figures 2d-2e, assuming that any of borings 24, 26 and 27 extend through posterior wall 11, it is clear that none of these are positioned centrally between a leading end wall and a trailing end wall.

Accordingly, Fuss fails to disclose all the features of claim 1. Withdrawal of this rejection is respectfully requested. Each of claims 2-7 depends from base claim 1 and is submitted as patentable over Fuss for at least the reasons supporting the patentability of base claim 1. Further reasons support the patentability of these claims as well. For example, claim 2 recites "wherein said trailing end wall and said leading end wall each have a height that is less than the height of both said anterior wall and said posterior wall." Again, the Final Office Action asserts that "height" is broadly interpreted as any height along a wall. However, Fuss fails to provide any disclosure of a height along a leading end wall and a trailing end wall which is less than a height along posterior wall 10 and anterior wall 11.

Independent claim 61 was also rejected as being anticipated by Fuss. Claim 61 has been amended and now recites, among other elements and features, "wherein said trailing end wall and said leading end wall each have a height between said upper and lower bearing members that is less than the height of both said anterior wall and said posterior wall between said upper and lower bearing members, and said anterior wall has a height between said upper and lower bearing members greater than a height of said posterior wall between said upper and lower bearing members." Fuss fails to teach, suggest or disclose the features of amended claim 61. Particularly, it discloses that the height of posterior wall 11 between upper and lower bearing members is less than the height of anterior wall 10 between upper and lower bearing members. See e.g., col. 6, lines 35-38 or Figure 1. However, it does not disclose that lateral walls 9 include a height between upper and lower bearing members that is less than the height of both anterior wall 10 and posterior wall 11.

Therefore, Fuss fails to disclose all the elements of claim 61 and withdrawal of this rejection is requested. Each of claims 63-65 depends from base claim 61 and is submitted as patentable over Fuss for at least the reasons supporting the patentability of base claim 61.

Each of claims 8, 9, 12, 14, 54, 55, 58, 60-62 and 65-67 also stands rejected under 35 U.S.C. §102(e) as being anticipated by Camino. As an initial matter, Applicants reserve the right to remove Camino with an affidavit under 37 C.F.R. §1.131 in this and any continuing applications. However, assuming only *arguendo* that Camino may be asserted with respect to the present application, it is believed that claims 8, 9, 12, 14, 54, 55, 58, 60-62 and 65-67 are patentable thereover as will be explained in the following comments.

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Of the claims rejected in view of Camino, claims 8, 54, 61 and 66 are independent claims, with each being directed to an implant comprising, among various other features, a leading end wall defining an implantation direction of the implant, a trailing end wall opposite said leading wall, a posterior wall extending between said leading end wall and said trailing end wall and an anterior wall extending between said leading end wall and said trailing end wall. The Final Office Action suggests that spacer 12 includes these features. To the contrary, none of the embodiments of Camino includes a leading end wall defining an implantation direction of the implant. As a corollary, Camino does not disclose that any portion of spacer 12 is a leading end defining an implantation direction of the implant. Accordingly, each of independent claims 8, 54, 61 and 66 is submitted as patentable over Camino. However, further reasons support the patentability of these claims.

For example, claim 8 has been amended and now recites, among other features and elements, "an opposite lower bearing member extending between . . . and including a lower strut" while claim 54 has been amended and now recites, among other features and elements, "an upper bearing member extending between . . . and including an upper strut." Support for the amendments to claims 8 and 54 may be found, for example, on page 26, lines 27-29, of the written description of the originally filed subject application. As clearly illustrated in Figures 1-30, none of endcaps 10, 110, 210, 310, 410, 510, 610, 710 and 810 includes an upper or lower strut. Accordingly, claims 8 and 54 are further submitted as patentable over Camino for at least this reason. Each of claims 9, 12 and 14 depends from base claim 8 and is submitted as patentable for at least the reasons supporting the patentability of base claim 8. Likewise, each of claims 55, 58 and 60 depend from base claim 54 and are submitted as patentable for at least the reasons supporting the patentability of base claim 54.

Claims 61 and 66 have also been amended and now recite, among other features and elements, "wherein said trailing end wall and said leading end wall each have a height between said upper and lower bearing members that is less than the height of both said anterior wall and said posterior wall between said upper and lower bearing members, and said anterior wall has a height between said upper and lower bearing members greater than a height of said posterior wall between said upper and lower bearing members." Camino also fails to disclose these features. Particularly, Camino discloses endcap 710 which includes surfaces that may be tapered

relative to one another from one end to an opposite end to form angle 731 as illustrated in Figure 26. Likewise, when cap 710 is used with cage 12, the shortest height of cage 12 between upper and lower end caps is limited to the portion which aligns with the shortest end of cap 710. Accordingly, cage 12 can only include one portion which is shorter than the remaining portions of cage 12. Likewise, Camino at least fails to disclose a trailing end wall and a leading end wall that each have a height between upper and lower bearing members that is less than the height of both an anterior wall and a posterior wall between the upper and lower bearing members.

Therefore, each of claims 61 and 66 is further submitted as patentable over Camino and withdrawal of this rejection is requested. Each of claims 62 and 65 depends from base claim 61 and is submitted as patentable over Camino for at least the reasons supporting the patentability of base claim 61. Likewise, claim 67 depends from base claim 66 and is submitted as patentable over Camino for at least the reasons supporting the patentability of base claim 66.

Each of claims 1, 2, 4, 5-7, 61 and 65 stands rejected under 35 U.S.C. §102(b) as being anticipated by Grosse. Of these, claims 1 and 61 are independent claims with each being directed to an implant comprising, among various other features, a leading end wall defining an implantation direction of the implant, a trailing end wall opposite said leading wall, a posterior wall extending between said leading end wall and said trailing end wall and an anterior wall extending between said leading end wall and said trailing end wall.

With respect to the embodiment of implant 2 illustrated in Figures 1-3, side 2a is a leading end wall which defines the implantation direction of implant 2 and side 2b is a trailing end wall. As would be appreciated by those skilled in the art, assuming hole 11 is an insertion tool engaging portion as suggested by the Final Office Action, its arrangement on side 2b facilitates implantation of implant 2 with an insertion tool from an anterior approach with side 2a being a leading end wall. As even further indication that side 2a is a leading end wall defining the implantation direction of implant 2, members 6 taper from an anterior to a posterior direction along portion 6a to facilitate insertion of implant 2. Members 6 also define an opposite angle along portion 6b which resists anterior expulsion of implant 2 from the disc space. Contrary to the arrangement of features of claims 1 and 61 however, implant 2 does not include a posterior wall extending between the leading end wall and the trailing end wall and an anterior wall extending between the leading end wall and the trailing end wall. Instead, as illustrated in

Figures 2 and 3 for example, it is clear that side 2a defines both the leading end wall and the posterior wall while side 2b defines both the trailing end wall and the anterior wall. Accordingly, the embodiment of implant 2 illustrated in Figures 1-3 fails to anticipate independent claims 1 and 61.

In Figures 4-6 there is illustrated an alternative embodiment implant 2 structured for insertion into the disc space via a lateral approach. In this form, the side of implant 2 opposite hole 11 is the leading end wall which defines the implantation direction of implant 2 while the side including hole 11 is a trailing end. In particular, for reasons similar to those submitted above, the positioning of hole 11 and the structure of members 6 dictate that the end opposite hole 11 is the leading end. Contrary to the language of claim 1 however, implant 2 does not include "at least one strut extending between said posterior wall and said anterior wall." Instead, as clearly illustrated in Figures 4 and 5, members 6 extend between the leading end wall and trailing end wall of implant 2. Additionally, claim 1 now also recites that the posterior wall includes at least one opening. However, implant 2 fails to include any opening in a posterior wall.

Therefore, for at least these reasons, claim 1 is submitted as patentable over Grosse. Claims 2, 4 and 5-7 depend from base claim 1 and are submitted as patentable for at least the reasons supporting the patentability of base claim 1. Further reasons support the patentability of these claims as well. For example, claim 6 recites "wherein said leading end wall includes an insertion tool engaging portion." Grosse fails to disclose any structure in a leading end wall analogous to the features of claim 6. As a further example, claim 7 recites "wherein said tool engaging portion is an internally threaded hole formed through said trailing end wall." Contrary to the language of claim 7, hole 11 is not disclosed as internally threaded. Therefore, these claims are further submitted as patentable for these reasons as well.

Claim 61 has been amended and now recites "wherein said trailing end wall and said leading end wall each have a height between said upper and lower bearing members that is less than the height of both said anterior wall and said posterior wall between said upper and lower bearing members, and said anterior wall has a height between said upper and lower bearing members greater than a height of said posterior wall between said upper and lower bearing members." As indicated above, in the embodiment of implant 2 illustrated in Figures 1-3, the

leading end wall is the posterior wall while the trailing end wall is the anterior wall. Therefore, implant 2 of Figures 1-3 does not anticipate this arrangement of features of claim 61.

Additionally, with respect to the embodiment of implant 2 illustrated in Figures 4-6, the trailing end wall and the leading end wall do not each have a height between upper and lower bearing members that is less than the height of both anterior wall 2b and posterior wall 2a between the upper and lower bearing members. Instead, as clearly seen in Figure 5 for example, the height of the leading and trailing end walls at their shortest point, which is where they intersect with posterior wall 2a, is the same as, not less than, the height of posterior wall 2a between upper and lower bearing members.

Accordingly, withdrawal of this rejection of claim 61 and allowance thereof are requested. Claim 65 depends from base claim 61 and is submitted as patentable over Grosse for at least the reasons supporting the patentability of base claim 61.

Conclusion

In view of the foregoing amendments and remarks, it is respectfully submitted that the present application is in condition for allowance with pending claims 1-14 and 50-70. Reconsideration of the present application is respectfully requested. Timely action towards a Notice of Allowance is hereby solicited. The Examiner is encouraged to contact the undersigned by telephone to resolve any outstanding matters concerning the present application.

Respectfully submitted:

By: 

Douglas A. Collier
Reg. No. 43,556
Krieg DeVault LLP
2800 One Indiana Square
Indianapolis, Indiana 46204-2079
Phone: (317) 238-6333

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